

Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

## REMARKS

### *Claim Rejections under 35 U.S.C. 102(b)*

*Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Minich (6,022,245).*

In response to this rejection, applicants have amended independent Claim 1 to contain subject matter which defines over prior art as Examiner stated in this Office Action. Accordingly Claim 1 should be allowable after removing the rejections thereto. Detailed explanations are given below.

Claim 1 recites that each upper contact of the electronic component has a fork-shaped mating portion defining a groove for snugly receiving a corresponding terminal. Minich fails to disclose this feature. In fact, Minich discloses each terminal has a resilient tail portion elastically abutting against circuit traces of the PCB. The structure of the circuit traces of Minich is substantially different to fork-shaped upper contacts of the present invention. Therefore, applicants request that the Examiner reconsider and withdraw the rejection.

### *Claim Rejections under 35 U.S.C. 103(a)*

*Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scheer (5,759,067) alone or taken in view of Hollyday et al (4,674,809), Fuerst (4,030,792) and Loudermilk et al (5,687,233).*

Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

Claim 1, as amended, defines an insulative housing, a terminal module having a plurality of terminals, and an electronic component assembled in the insulative housing. Each terminal comprising a mounting portion, an inclined contacting portion extending from a front end of the mounting portion and a tail portion extending rearwardly from a rear end of the mounting portion. Claim 1 further recites that the electronic component comprising a plurality of upper contacts each having a fork-shaped mating portion defining a groove for snugly receiving corresponding tail portion of the terminal. Further the electronic component includes a plurality of lower contacts for connecting with a mother board. Therefore, in the present invention, the electronic component can be assembled and replaced conveniently as desired.

Scheer fails to disclose an electronic component having upper contacts providing fork-shaped mating portions for electrically connecting with terminals. Scheer discloses the terminals extending through vias or plated holes of a PCB to enable connections with the PCB. As disclosed in the third paragraph of column 3 in Scheer, the terminals are firstly assembled to the PCB such that connection ends thereof protrude from the PCB. After the terminals are mounted on the PCB, front portions of the terminals are bent at a moderate obtuse angle. Therefore, it is important for Scheer to ensure reliable connections between the terminals and vias or plated holes of the PCB. Because the PCB is of smaller thickness, the terminals are immovably fixed, such as soldered, on the PCB since the PCB is of small thickness. Further the PCB has some other signal conditioning components mounted thereon. Therefore, if any component of the terminals and the PCB is

Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

damaged, the terminals and the PCB module must be replaced wholly. In view of absence of any clear teaching of features of Claim 1, independent Claim 1 is then believed to be patentable over Scheer.

Hollyday et al. do not provide any teaching relating to an electronic component having upper contacts providing fork-shaped mating portions for electrically connecting with terminals. As disclosed in FIG7 of Hollyday et al., a terminal (28) is provided for inserting into a socket terminal (116) of a PCB (106). And the socket terminal (116) is located in a recess (126) of a cover (124), since the PCB is of small thickness. The Hollyday et al. do not contain any suggestion that they be combined with Scheer or that they be combined in any manner suggested. Even if one having ordinary skilled in the art who modifies the vias or plated holes of Scheer to have Hollyday et al's socket terminals, the Scheer connector must provide additional cover or base defining recesses to receive the socket terminals since metal shell is of small thickness. Moreover, if the front portions of the Scheer terminals are bent after the Scheer terminals are movable mounted on the PCB, it will be difficult for Scheer to ensure connections between the terminals and the socket terminals of the PCB. Therefore, even if teachings of Hollyday et al. are applied to Scheer, the references would produce an inoperative combination which does not meet the Claim 1. Applicants request the Examiner reconsider and withdraw the rejection.

Loudermilk et al. fail to disclose an electronic component having upper contacts providing fork-shaped mating portions electrically connecting with terminals, and do not contain any suggestion that they be combined with Scheer or

Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

that they be combined in any manner suggested. Therefore, even if combined, the noted shortcomings of Scheer with respect to the feature of Claim 1 are not forthcoming. In view of absence of any clear teaching of the features of Claim 1, independent 1 is believed to be patentable over Scheer in view of Loudermilk et al.

Fuerst does not contain any suggestion that it can be combined with Scheer or that it be combined in any manner suggested. As discussed above, Scheer teaches terminals immovably mounted on the PCB. It is impossible for the Scheer PCB to provide any upper contacts having fork-shaped mating portion for receiving the terminals. Therefore, even if combined, the references would produce an inoperative combination which does not meet the Claim 1. Claim 1 should be patentable over Scheer in view of Fuerst.

In view of the absence of any clear teachings of the feature of Claim 1 in those references, applicants submit that any rejection of amended Claim 1 on the basis of these references is improper.

*Claim 2, 3, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scheer (5,759,067) in view of Loudermilk (5,687,233), Hollyday (4,674,809) and Fuerst (4,030,792).*

In response to this, applicants have amended Claim 2, and Claim 3 has been canceled and rewritten into independent Claim 10.

As illuminated above, independent Claim 1 is believed to be patentable over

Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

Scheer in view of Loudermilk et al., Hollyday et al. and Fuerst. Therefore, dependent Claim 2, and 4 are also believed to be patentable over Scheer in view of Loudermilk et al., Hollyday et al. and Fuerst since they depend directly from independent claim 1. Additionally, Claim 2 further recites the terminal module includes a pair of opposite printed circuit boards. The mounting portions of the terminals are sandwiched between the opposite printed circuit boards. This feature is not disclosed in any references.

Independent Claim 5 includes a housing defining upper and lower receiving spaces and a rear receiving space therein, upper and lower terminal modules respectively with a plurality of contacts thereof, and a pair of electronic components retainable spatially located in the rear space of the housing. Claim 5 further recites that each of the electronic components includes a base with a filter printed circuit board and magnetic coil, a plurality of upper contacts located on an upper portion of the base and engaged with the corresponding contacts, respectively, and a plurality of lower contacts extending downwardly beyond a bottom face of the assembly. In the present invention, the upper and lower contacts are reliably mounted on the base. The electronic components with filter printed circuit boards and magnetic coils are separately provided for corresponding terminal modules, and may be replaced conveniently and individually as desired.

Scheer does not disclose each of electronic components including a base with a filter printed circuit board and magnetic coil. In Fact, Scheer discloses upper and lower terminal modules and a pair of media filers integrally formed with a common PCB. Therefore, when one of the media filers or one of the terminals is

Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

broken during assembling or bending the terminals, both media filers and the terminals have to be replaced.

Loudermilk et al., Hollyday et al. and Fuerst do not provide any teaching relating to upper and lower terminals respectively connecting to separate electronic components. Upper and lower contacts of Loudermilk et al., Hollyday et al. and Fuerst are directly mounted on a PCB. Therefore, even if the teachings of Loudermilk et al., Hollyday et al. and Fuerst are applied to Scheer, the noted shortcomings of Scheer with respect to the features of Claim 5 are not forthcoming. Claim 5 must be found allowable. Applicants request that the Examiner reconsider and withdraw the rejection.

Moreover, claim 5 defines a pair of discrete front and rear electronic components retainably spatially located in said rear space, each of said pair of front and rear electronic components including a base with a filter printed circuit board and magnetic coil. As mentioned earlier, the discrete arrangement of the two spaced electronic components advantageously performs cost-efficient replacement/repair of the defective assembly. On the other hand, none of the cited references discloses this spatial front-to-back arrangement of the two electronic components. Thus, different from what the Examiner states, the two separate electronic components each with the associated printed circuit board, essentially provides not only the new "cost-efficient replacement" result but also the different front-to-back arrangement instead of the upward stacked arrangement disclosed in Scheer.

Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

Since independent Claim 5 is believed to be in condition for allowance. The added Claims 6-10 are also patentable for reason of its dependency upon Claim 5.

In response to this, Claim 3 has been canceled and rewritten into new independent Claim 11. Independent Claim 11 includes an insulative housing, a terminal module having a plurality of terminals, and an electronic component assembled in the insulative housing. Each terminal comprises a mounting portion, an inclined contacting portion extending from a front end of the mounting portion and a tail portion extending rearwardly from a rear end of the mounting portion. The electronic component comprises a plurality of upper contacts and a plurality of lower contacts for connecting with a mother board. Claim 6 further recites tail portion of each terminal is fork-shaped and defines a groove for snugly receiving a corresponding upper contact.

Scheer does not disclose each terminal having a fork-shaped tail portion for connecting with a corresponding upper contact. Scheer discloses the terminals extending through vias or plated holes of a PCB to enable connections with the PCB. Front portions of the terminals then are bent at a moderate obtuse angle. Scheer does not provide any teaching relating to terminals having fork-shaped tail portions for receiving the upper contacts. In fact, as Scheer disclosed, the terminals are bent after being mounted on the PCB. It is inevitable for the terminals extending through the PCB to ensure connections between the terminals and the PCB since the PCB has a smaller thickness. Therefore, the invention is contrary to teachings of Scheer. It is impossible for the Scheer PCB to provide terminals having fork-shaped tail portion for receiving upper contacts.

Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

Loudermilk et al. do not provide any teaching relating to terminals having upper contacts providing fork-shaped tail portions for electrically connecting with upper contacts. And Hollyday et al. fail to disclose terminals having inclined contacting portions either. Fuerst neither disclose terminals having inclined contacting portion nor an electronic component having lower contacts for connecting with a mother board.

Therefore, even if teachings of Hollyday et al., Loudermilk et al. and Fuerst are applied to Scheer, the references would produce an inoperative combination and the noted shortcomings of Scheer with respect to the feature of Claim 6 are not forthcoming. Combination of Scheer, Hollyday et al., Loudermilk et al. and Fuerst cannot render obvious the invention as defined in the independent Claim 6. In view of any clear teachings of the features of Claim 1 in those prior-art references, applicants submit that any rejection of amended claim 1 on the basis of these references is improper.

Since Claim 11 now defines a patentable invention, new added dependent Claim 12 must also be found allowable.

*Claim 3 is reject under 35 U.S.C. 103(a) as being unpatentable over Minich in view of Lu.*

Claim 3 is now rewritten into a new independent Claim 10. Applicant believes that new independent Claim 11 is now patentable over the cited prior art. Detailed explanations are given below.



Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

Regarding the new independent Claim 11, a modular jack mounted on a mother board comprises an insulative housing, a plurality of terminals assembled in the housing, and an electronic component with a plurality of upper and lower contacts. Each terminal has a fork-shaped tail portion thereby forming a receiving groove for snugly receiving a corresponding upper contact. The lower contacts are provided for electrically connecting with the mother board.

Minich fails to disclose terminals having fork-shaped tail portion for receiving upper contacts. In fact, Minich discloses a multi-port modular jack comprising a plurality of upper and lower terminals, a common internal PCB including a plurality of upper and lower contacts mounted thereon, and a edge connector electrically connection with the lower contacts and a mother board. As Minich disclosed, the upper contacts of the PCB are substantially blade-shaped, so that it is difficult for Minich connector to ensure all connections between the upper and lower terminals in every mating port and the upper contacts of the PCB. So that each Minich terminal provides a resilient tail portion elastically connect with a corresponding upper contact of the PCB under a preload force. If terminals and upper contacts in Lu et al are applied to Minich, it is difficult to accurate the PCB and it would waste not only time, but also cost. Therefore, applicants submit that the proposed combination of Lu et al. and Minich would not be physically possible or operative. Independent Claim 10 is believed to be patentable over Minich in view of Lu et al. The added Claim 11 is also patentable for reason of at least its dependency upon Claim 10.

Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

*Claim 4 also rejected under 35 U.S.C. 103(a) as being unpatentable over Minich in view of Loudermilk et al.*

Claim 4 is now depends directly from amended independent Claim 1. By such amendments, applicant believes that Claim 4 is now patentable over the cited prior art. Detailed explanations are given below.

Amended Claim 1 discloses a plurality of terminals engaging with fork-shaped upper contacts, while Minich and Loudermilk et al. neither disclose nor provide any teaching relating to fork-shaped terminals engaging with upper contacts. Minich and Loudermilk et al. have been described as above, a detailed description thereof is omitted here. The references do not contain any suggestion that they may be combined, or that they be combined in the manner suggested. Therefore, even if combined, the references would produce an inoperative combination which is not meet the Claim 1.

Claims 1 is believed to be in condition for allowance. Claim 4 is also patentable since it depends directly from Claim 1.

In view of the above claim amendments and remarks, the subject application is believed to be in a condition for allowance and an action to such effect is earnestly solicited.

Respectfully submitted,  
Iosif Korsunsky et al.

Appl. No. 10/033,663  
Amdt. Dated Mar. 1, 2004  
Reply to Office Action of Nov. 28, 2003

By 

Wei Te Chung

Registration No.: 43,325  
Foxconn International, Inc.  
P. O. Address: 1650 Memorex Drive,  
Santa Clara, CA 95050  
Tel No.: (408) 919-6137